

XXV. A CATALOGUE OF THE LUCANIDAE
IN THE COLLECTION OF THE INDIAN
MUSEUM.

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Museum.*

(Plate XXIX.)

The size and variability of the mandibles of male Lucanidae have naturally attracted special attention from the early writers on this family; and the difficulty of correlating the sexes with certainty seems to have led to an undue neglect of the female. Leutner has, it is true, treated females as carefully as males in his monograph of the Odontolabinae; and a number of recently discovered species have been described from specimens of both sexes. But reasons for the traditional association of females with males seem in many species to have been too vague for record; and the most distinctive characteristics of the females of a number of well-known species seem still to remain undescribed.

In the following short account of our collection I have therefore paid special attention to females.¹ The determination of their subfamilies, and sometimes even genera, has been based on tradition, and I am doubtful whether any of my specific determinations are in disagreement with the associations commonly recognized in European museums. But so far as our material permits, reasons for the association have been found and recorded, and attention has been drawn to structural characters by which the females of various species may be recognized.

In one instance the consideration of female characters has led me to suggest a change in generic definitions. The genera concerned are *Hemisodorcus*, *Eurytrachelus* and *Dorcus* of Van Roon's catalogue.²

The female of *Hemisodorcus fulvonotatus* was found to differ from that of *H. nepalensis* in having a pair of tubercles on the head instead of a single one; and the female of *Dorcus suturalis*

¹ Except in the subfamily Odontolabinae, where Leutner has rendered this unnecessary, and in the subfamily Cladognathinae where our material, which is almost entirely Indian, is inadequate for this except in the genus *Cladognathus*. Outside this genus the association of opposite sexes of such species of Cladognathinae as we possess has been based on colour and locality. I have no doubt of the correctness of the determinations made, but have had no opportunity of considering the differentiation of females of species differing in structure but not in colour.

² *Coleopterorum Catalogus*, Pt. 8, Lucanidae, Berlin, 1910.

was found to differ from the other species of *Dorcus* in our collection in the opposite direction. Further investigation then showed that the prosternal process of both sexes of the latter species was elevated as in *Hemisodorcus*, not flattened as in *Dorcus*; and that the anterior plates of the head of the male of the former species resembled those of *Eurytrachelus*, not *Hemisodorcus*.

Thomson¹ defines these genera—including as a distinct genus *Platyprosopus*, which Van Roon unites in his catalogue with *Eurytrachelus*—by means of the structure of the mandibles and anterior plates of the head of the male, and the structure of the prosternum. *Hemisodorcus* is said to differ from the other three genera in having elongate mandibles, and this character appears to have been regarded by subsequent authors as being in itself diagnostic of the genus. But it is not correlated with the other so-called generic characters, and a consideration of the female points to the conclusion that it is of less importance than them.

The material in our collection does not enable me to determine whether these other characters are always sharply distinctive, or sometimes grade into one another, but it proves clearly that the extent of their development shows a considerable degree of variation in different species. Thus the posterior end of the prosternal process, though it is always much higher than the mesosternum and more or less abruptly truncate in *Hemisodorcus* and *Eurytrachelus*, and is depressed in the most typical species of *Dorcus* and *Platyprosopus*, is sometimes, in the genus *Dorcus* at least, distinctly convex immediately in front of a narrow depressed posterior margin.

In the table for the determination of these genera given below, I have found it convenient to attach primary importance to the structure of the prosternum, because this applies to both sexes.² But when dealing with males only it is often easier to consider first the character of the anterior plates of the head.

These plates, the clypeus and labrum, appear to be more or less fused in most, if not all, Lucanidae; and the plate thus formed—which may be termed the clypeolabrum—is often itself indistinguishably fused with the frons. Among the species before me the outlines of these plates are best seen in *Lucanus cantori*. In the female of this species the clypeus is less coarsely punctured than the frons, and is bounded behind by a tolerably distinct suture: it is very narrow and is keeled in front, overhanging by almost its whole width the larger, still more sparsely punctured, and much more hairy labrum.³

In the male the ridge between the clypeus and the labrum is much larger, but the boundary between the clypeus and the

¹ *Ann. Soc. Ent. France* (4) 11, 1862, pp. 421-2.

² The genetic relationships of these genera can only be determined by the examination of a representative collection of their species from all parts of the world. I have examined scarcely any but Indian forms.

³ In the females of most species the labrum is much smaller and the clypeus somewhat larger; consequently the labrum is much obscured.

frons appears only as an exceedingly obscure transverse convexity about one-third of the way from the clypeolabral ridge to the ridge between the anterior angles of the head. That this obscure convexity does really mark the junction of the clypeus and the frons is confirmed by the fact that in *Hexarthrius forsteri*—a species of which the female is unknown to me—it is replaced by a very distinct suture.¹ In *Hexarthrius forsteri* the clypeolabral ridge is replaced by a pair of angular processes, structures which reappear in many species of *Lucanidae*, and may be supposed when present always to represent this ridge.

The presence of these processes, or of the ridge from which they are derived, distinguishes the genera *Eurytrachelus* and *Platyprosopus* from *Hemisodorcus* and *Dorcus*. But when the whole ridge is present it is often very low, and there seems reason to think that it has sometimes been overlooked, with the result that species of *Eurytrachelus* have been placed in the genus *Dorcus*, and that the differences between the prosterna of these two genera have come to be regarded as of no importance.

The morphological anterior margin of the labrum is, however, densely fringed with hair, and the clypeolabral ridge is hairless. When, therefore, the apparent anterior margin of the clypeolabrum as seen from above is hairy, and no ridge or processes are seen, the specimen will belong to the genus *Hemisodorcus* or *Dorcus*. When, however, it is hairless, a closer examination will show that this margin is really the clypeolabral ridge and that the true anterior margin of the plate is hidden beneath it.

The genera *Hemisodorcus*, *Dorcus*, *Eurytrachelus* and *Platyprosopus* may then be distinguished thus :—

- | | | |
|----|--|--|
| 1. | { Posterior end of prosternal process abruptly rounded or truncate in both sexes, its horizontal surface raised well above surface of mesosternum 2.
Posterior end of prosternal process lower in both sexes, either uniformly depressed, or convex in front of a narrow depressed border defined on the inner side by a marginal groove 3. | |
| | | |
| 2. | { Clypeolabral ridge absent in male; female with upper tooth of mandibles very strong and with a median cephalic tubercle <i>Hemisodorcus</i> .
Clypeolabral ridge present in male (often as a pair of lateral teeth); female with upper tooth of mandibles very weak and with a pair of cephalic tubercles <i>Eurytrachelus</i> . | |
| | | |
| 3. | { Antennae normal in both sexes; clypeolabral ridge absent in male; female with a pair of cephalic tubercles <i>Dorcus</i> .
Seventh joint of antenna (the last before the three bearing pilose lamellae) with a slender polished anterior process as long as the lamella of the succeeding joint and tipped with a cluster of hairs (? in both sexes); clypeolabral ridge present in male; female ? <i>Platyprosopus</i> . | |
| | | |

¹ This suture is also present in the other species of *Hexarthrius* in our collection; but in them the clypeus is disproportionally large, the labrum being reduced to a narrow strip along its outer margin.

The above diagnoses are necessarily provisional, being based on Indian species only; but I have found it convenient to adopt them in the following catalogue. Apart from this I have followed the classification, and with one or two exceptions the synonymy, adopted in Van Roon's catalogue (*loc. cit.*, above, p. 407, footnote), where references to literature will be found. As, however, many references are incorrectly given there, the following corrections of the inaccuracies I have noticed will facilitate use.

Lucanus cantori. Hope, *Trans. Ent. Soc. London* IV, 1845-7, p. 73; Hope, *Ann. Mag. Nat. Hist.* XII, 1843, p. 363.

Odontolabis burmeisteri. Hope, *Trans. Ent. Soc. London* III, 1841-3, p. 279, pl. xiii, fig. 3.

Metopodontus maclellandi. Hope, *Ann. Mag. Nat. Hist.* XII, 1843, p. 364; Hope, *Trans. Ent. Soc. London* IV, 1845-7, p. 74.

Metopodontus occipitalis = asteriscus. Add—Westwood, *Cab. Or. Ent.*, pl. x, fig. 4.

Metopodontus wentzel-heckmannae. Locality—N. Nyassaland, not Annam.

Prosopocoelus buddha. Hope, *Trans. Linn. Soc. London* XIX, 1843, p. 107; Parry, *Trans. Ent. Soc. London* (3) II, 1864, pl. xii, fig. 3, ♂.

Prosopocoelus bulbosus. Hope, *Trans. Linn. Soc. London* XVIII, 1841, p. 589, pl. xl, fig. 2.

Aegus parallelus. Locality—Khasi Hills, not Prince of Wales Island. The latter locality is recorded for *A. capitatus* (♂) = *A. sinister* (♀), see Westwood, p. 56 of Parry's Catalogue in *Trans. Ent. Soc. London* (3) II, 1864-6.

Nigidius elongatus. Boileau, *Naturaliste* XXIV, 1902, p. 205.

Nigidius vagatus. I have failed to trace this species at all.

Boileau's "Note sur Lucanides conservés dans les collections de l'Université d'Oxford et du British Museum" (*Trans. Ent. Soc. London*, 1913, pp. 213-272, pl. ix) is an important paper published since the catalogue.

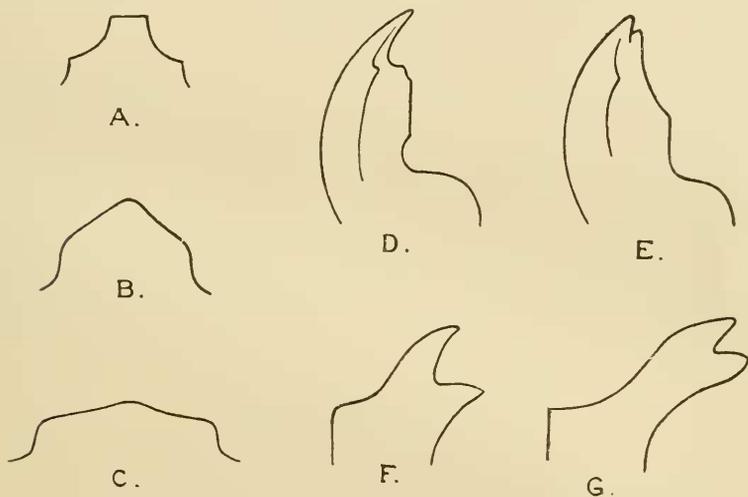
When on leave in Europe in 1913, I took the opportunity of checking my identifications by comparison of a selection of our specimens with those in the British Museum and the Deutsches Entomologisches Museum. My thanks are due to Mr. Arrow and Dr. Horn for the facilities granted me. I have also to thank Mr. Arrow for information with regard to a number of specimens which I had not time to examine fully in London myself, and H. E. Lord Carmichael, Mr. E. E. Green, Mr. R. S. Lister, Mr. E. A. D'Abreu, the Colombo Museum, the Bombay Natural History Society, and the Imperial Agricultural and Forest Research Institutes for the loan of specimens, a number of which have been added to the Indian Museum collection.

Localities not represented by either sex in the Indian Museum collection are marked with an asterisk (*). The types of *Metopodontus foveatus* subsp. *birmanicus* are now in the British Museum. Those of all other new forms described are in the Indian Museum.

Genus **PSEUDOLUCANUS**, Hope.

Pseudolucanus atratus, Hope.

E. Himalayas: Darjeeling (♂).



TEXT-FIGURE 1.

- A. Clypeus of *Lucanus mearsi*, ♀.
- B. " " " " *lunifer*, ♀.
- C. " " " " *cantori*, ♀.
- D. Left mandible of *Lucanus mearsi*, ♀.
- E. " " " " *smithi*, ♀.
- F. Distal end of right anterior tibia of *Lucanus mearsi*, ♀.
- G. " " " " " " " " *westermanni*, ♀.

Genus **LUCANUS**, Scop.

Lucanus laminifer, Waterhouse.

Assam: Khasi Hills, 1000-3000 ft. (♂).

Lucanus cantori, Hope.

(Text-figure 1C.)

E. Himalayas: Darjeeling District—Darjeeling (♀); Kurseong, 5000 ft. (♂).

Khasi Hills: Shillong (♂).

The longitudinal yellow bands on the femora make the association of males and females of this species easy. In females

the clypeus is transversely linear (text-fig. 1C), and the dorsal tooth of the mandibles is obsolete.

Lucanus lunifer, Hope.

(Text-figure 1B.)

W. Himalayas: Simla (σ); Dehra Dun* (σ); Mussoorie* (σ ♀); Naini Tal (σ ♀).

Assam: Khasi Hills (σ).

In the specimen from the Khasi Hills the upper fork of the mandibles is distally enlarged and truncate; in the rest it is normal as in the type specimen (see Boileau, *Trans. Ent. Soc. London*, 1913, p. 218).

The female closely resembles that of the preceding species, but the upper surface of the head is more convex; the clypeus (text-fig. 1B), whose anterior margin is strongly angular instead of almost straight, extends much further forward; and there is a small but distinct tooth on the dorsal surface on the mandibles. The association of this form of female with the male of the present species rests on its uniformly black legs, which separate it from the preceding species, and on its large size and apparent greater abundance in the Western than in the Eastern Himalayas, which separate it from the three following species.

Lucanus mearsi, Hope.

(Text-figures 1A, D and F.)

W. Himalayas: Mussoorie (σ ♀).

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft. (σ ♀); Kurseong, 5000 ft. (σ ♀).

To one specimen is attached the label "Bores into dead sap wood of Kharani (*Symplocas* sp.); found at elevation 5000 to 6000 ft. in Sikkim—G. Rogers."

Females of this and of the two following species differ from those of the two preceding species in their smaller average size, and in the shape of the clypeus (text-fig. 1A) which, though produced in front as in *L. lunifer*, is always truncate or broadly rounded, instead of strongly angular, in the middle line. Females of the present species may be distinguished from those of the two following by the shape of their anterior tibiae, whose two distal marginal teeth are not specially elongated and are not fused at the base (text-fig. 1F). They are usually of a deep olivaceous colour rather than jet black, and fresh specimens are more or less completely covered with fine golden pile—characters which are shared by the male sex.

Lucanus smithi, Parry.

(Text-figure 1E.)

Van Roon gives *smithi*, Parry, as a synonym of *villosus*, Hope, in his catalogue. Boileau, however, states (*Trans. Ent. Soc. London*

1913, p. 219) that a male of *L. villosus* in the British Museum, possibly the type, closely resembles *L. lunifer* in structure; the measurements given in Gray's brief diagnosis are too large for any specimens of *L. smithi* known to me; the mandibles of *L. villosus* are described by Gray as unidentate, whereas those of *L. smithi* are at least tridentate except in very small specimens; Parry was acquainted with *L. villosus* when he described *L. smithi*.

L. smithi is represented in our collection from the following localities:—

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft., (♂ ♀); Mungphu (♂); Kurseong, 5000 ft. (♂ ♀); Siliguri, in the Terai, a few miles south of the base of the hills (♂ ♀).

The thickening of, and multiplication of teeth on, the mandibles of the male a little beyond the middle is reflected in the great breadth of the mandibles of the female (text-fig. 1E) at about this point, beyond which the inner margin is straight or slightly wavy and blade-like instead of strongly excavate as in *L. mearsi* and *L. westermanni*. The surface is covered with pile as in *L. mearsi*, and the form of the clypeus also resembles that of this species. The anterior tibiae of *L. smithi* resemble those of *L. westermanni* rather than those of *L. mearsi*.

Lucanus westermanni, Hope.

(Text-figure 1G.)

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft.* (♂ ♀); Kurseong, 5000 ft. (♂ ♀).

This species is less densely pilose in both sexes than are fresh specimens of either of the two preceding species. In very small males the mandibles are not forked distally, and the submedian tooth is minute. Small males of the two preceding species show a tendency in the same direction, and it is not impossible that in extreme cases the mandibles of *L. smithi* at least may be indistinguishable from those of the present species—in such cases the length of the pile on the reflexed margins of the elytra would afford a useful guide to identification. Fully hardened specimens of both sexes are jet black in colour, others are reddish. None are in any degree olivaceous.

The mandibles of the female resemble those of *L. mearsi*. The frons is more convex in the middle line in front than in that species. The clypeus differs from that of *L. mearsi* and *L. smithi* in being less abruptly truncate, often broadly rounded, in front. The two distal teeth of the anterior tibiae (text-fig. 1G) are united at the base; their length is about equal to the greatest breadth of the tibia exclusive of its teeth.

A female from Dehra Dun, in the Forest Research Institute collection, resembles *L. westermanni* in general appearance; but its clypeus is like that of *L. mearsi*, and its anterior tibiae are intermediate between those of these two species.

Genus **HEXARTHRIUS**, Hope.

Hexarthrius davisoni, Waterhouse.

Madras Presidency: Cuddapah* (♂); Palni Hills (♂ ♀).

Hexarthrius mniszewski, Thomson.

Assam: Sylhet (♂).

Hexarthrius forsteri, Hope.

Assam: Khasi Hills (♂).

Hexarthrius parryi, Hope.

Assam: Khasi Hills—Shillong, 3000-5000 ft.* (♂).
Sibsagar (♂).

The anterior parts of the elytra, though darker than the posterior, are not black in our specimen. They are not sharply marked off from the latter, as in Hope's figure, either in our specimen or in that from Shillong belonging to the Pusa collection.

Genus **NEOLUCANUS**, Thomson.

Neolucanus castanopterus, Hope.

W. Himalayas: Almora—Ramnee.

E. Himalayas: Nepal—Katmandu (♂).

Sikkim—Shamdang, 3000 ft. (♂).

Darjeeling District—Darjeeling, 6000 ft. (♂);

Mungphu (♂); Kurseong, 6000 ft. (♂);

Singla, 1500 ft.* (♂).

Bengal: Duars—Buxa, near Bhutan frontier (♂).

Assam: Khasi Hills (♂ ♀)—Shillong (♂).

Sibsagar (♂).

Neolucanus marginatus, Waterhouse.

Lower Burma: Amherst District of Tenasserim—Misty Hollow to Sukli, 2100-2500 ft., Dawna Hills (♀).

This specimen closely resembles *N. parryi*, but the anterior femora are scarcely denticulate though they do not look worn. The mentum, too, has only a rudimentary crescent-shaped crest.

Neolucanus lama, Olivier.

E. Himalayas: Darjeeling District—Lebong* (♀); Mungphu (♀); Kurseong, 5000 ft. (♂ ♀).

Assam: Khasi Hills (♂).

Genus **ODONTOLABIS**, Hope.

Odontolabis siva, Hope.

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft*. (♂ ♀); Mungphu (♂ ♀); Pashok; (♂ ♀); Bhutan (♀).

Bengal: Duars—Buxa (♀).

Assam: Khasi Hills (♂ ♀)—Shillong (♂).

Sibsagar (♂).

Sylhet (♂).

Odontolabis cuvera, Hope.

S. India (♂ ♀); Slopes of Nilgiris (♂); Wynad (♂).

E. Himalayas: Darjeeling District—Darjeeling (♂ ♀); Lebong, 5000 ft.* (♂); Pashok* (♀); Mungphu (♂ ♀).

Assam: Khasi Hills (♂ ♀)—Shillong (♂); Cherrapunji (♂). Naga Hills (♂).

Lower Burma: ? Rangoon*¹ (♂ ♀); near Sukli, Dawna Hills (Amherst District of Tenasserim), ca. 2000 ft. (♀); Tavoy (♀).

This species is evidently rare in South India. There is, however, a large male in the Madras Museum collection of South Indian insects; and in our collection are two intermediate males, one small male, and one female from South India.

The female can easily be distinguished from that of *O. delesserti*, which is much commoner in South India, by its broadly flattened mentum with distinct lateral keels close to the margin.

Odontolabis delesserti, Guerin.

S. India (♂ ♀); Travancore—High Range* (♀); Ponnudi* (♀); Malabar—Wynad (♀); Palni Hills* (♂ ♀); Cuddapah* (♀).

The mentum of the female is broadly concave in the middle and broadly convex laterally.

Odontolabis burmeisteri, Hope.

S. India: Coorg—Mercara* (♀); Travancore (♀).

The specimen from Travancore agrees in every respect with Leutner's description of this species, except that there is only a narrow band of yellow on the reflexed borders of the elytra. The other specimen belongs to the Pusa collection. It is very much

¹ This record is based on specimens in the collection of the Bombay Natural History Society. The male (a large one) is the only specimen of its sex that I have seen from Burma, and establishes the identity of the form found there with that found in Assam and the Himalayas. The specimens are unlikely, however, to have come originally from Rangoon itself, for the species appears to be confined to hilly country, and is not known to descend below 1500 or 2000 ft.

darker in colour and has no black on the reflexed borders of the elytra.

Odontolabis latipennis, Hope.

Malay Peninsula : Johore (♂).

Odontolabis aeratus, Hope.

Sumatra : Sinkep Island (♂ ♀).

Odontolabis carinatus, Linnaeus.

Ceylon : Central Province—Lindula* (♂) ; Maskeliya (♂ ♀).
Sabaragamuwa—Bulutota in Ratnapura District (♀).

Genus **HETEROCHTHES**, Westwood.

Heterochthes andamanensis, Westwood.

South Andamans (♂ ♀).

Genus **CLADOGNATHUS**, Burmiester.

Cladognathus arrowi, n. nom.

=*C. confucius*, auct., nec Hope.

E. Himalayas : Darjeeling District—Darjeeling, 7000 ft. (♀) ;
Singla, 1500 ft. (♂) ; Pashok (♂).

Assam : Sibsagar (♂).

The type specimen of *C. confucius*, Hope, is in the British Museum, and has proved to be a small specimen of the following species. A new name is therefore required for the present species in which the mandibles even of the largest males are straight and bear no very strong teeth. I have much pleasure in naming so fine an insect after Mr. G. J. Arrow, whose ever-ready help in the naming of Lamellicornia has greatly facilitated my work on the group.

In the female the head is very finely punctured ; the anterior angles of the pronotum are scarcely truncate ; and the terminal process of the anterior tibia is slender, being formed by the union of two spines only.

Cladognathus giraffa, Fabricius.

W. Himalayas : Dehra Dun (♂ ♀).

E. Himalayas : Darjeeling District—Singla, 1500 ft. (♀) ;
Pashok (♂ ♀).

Bengal : Kaptai, Chittagong Hill tracts (♂ ♀).

Assam : Khasi Hills (♂).

Sibsagar (♂ ♀).

Andamans : Port Blair (♂).

The large tooth and double curve of the mandibles, characteristic of large males of this species, are both lost in intermediate

and small forms; but the forked apex is indicated even in a specimen (in the Dehra Dun collection) in which scarcely a trace of any tooth except the basal remains. The wide separation of the tubercles on either side of the middle of the anterior margin of the head, and the sharp posterior margin of the lower surface of the anterior femora are characters which distinguish small as well as large males of this species from those of the last. Attention may also be called to three other differences, differences which, though slight in themselves, are worthy of note on account of their intensification in the female. They are: the faintly rougher average texture of the anterior parts of the present species; the slightly broader (oblique) truncation of the anterior angles of the pronotum; and the somewhat less slender terminal process of the anterior tibia. The female of the present species differs from that of the preceding species in having the head very coarsely punctured, the anterior angles of the pronotum distinctly (transversely) truncate, and the terminal process of the anterior tibia much stouter and composed of 3-4 teeth.

Genus **METOPODONTUS**, Hope.

Metopodontus foveatus, Hope.

(Text-figure 2.)

The type of this species, which has been re-examined by Boileau, is from Sylhet in Assam; our specimens of the typical form are from Assam and the adjacent Naga Hills. Boileau (*Bull. Soc. Ent. France*, 1911, pp. 63-5, 1 text-fig.) has described as a distinct species *M. poultoni* "nombreux specimens des deux sexes, de diverses provenances, mais principalement recus du Boutan (Sakiou, Maria Basti ¹)." Our specimens of this form are all from the Eastern Himalayas. A third form is represented by a series of specimens from (?) Rangoon,² belonging to the Bombay Natural History Society and to the Agricultural Research Institute, Pusa. The large male of this series (text-fig. 2F) has one large tooth only on each mandible as in *M. foveatus* (text-fig. 2D), not two as in *M. poultoni* (text-fig. 2A); but this tooth is basal as in males of *M. foveatus* of moderate size (text-fig. 2E), not median as in large males of that form. These three forms, and possibly *M. cinnamomeus* from the Sunda Islands, should probably be regarded as local races of a single species. It seems doubtful whether any definite distinctions between them exist except in large males.

I. *M. FOVEATUS* subsp. *POULTONI*, Boileau.

W. Himalayas: Almora—Kimoli (♀).

E. Himalayas: Darjeeling Dist.—Darjeeling (♂). Kurseong (♂ ♀); Pashok (♂ ♀).

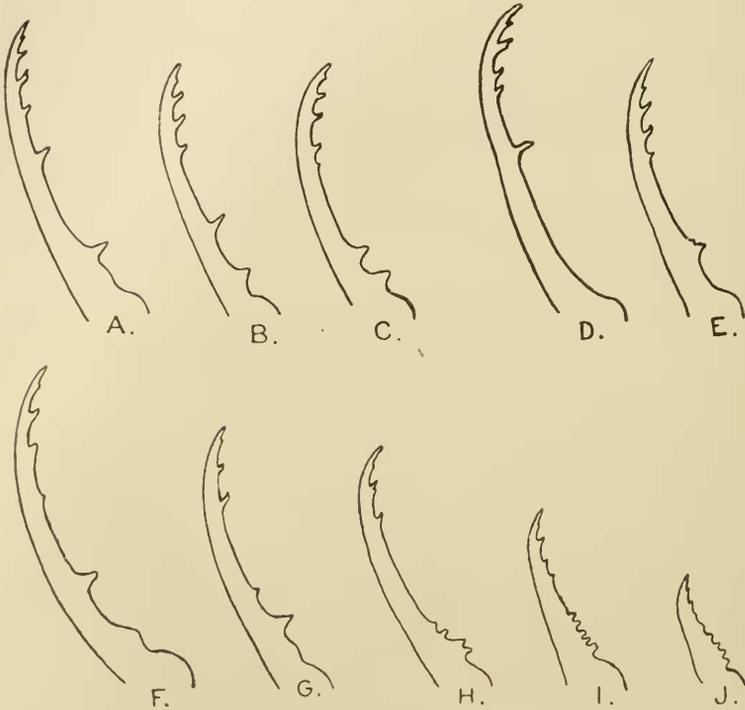
¹ Maria Basti (or Kaggia Monastery) is situated in the part of the Darjeeling District sometimes known as "British Bhutan." Sakiou is doubtless a misprint for Sakion(g), a few miles further west in the same district.

² Probably brought with timber from some hilly district.

The only male from Kurseong is a small one and, like all females, is identified on zoogeographical grounds.

2. *METOPODONTUS FOVEATUS*, Hope, s. str.

Assam (♀): Khasi Hills—Cherrapunji (♂).
Naga Hills (♂).



TEXT-FIGURE 2.

- A-C. Left mandibles of macrodont males of *Metopodontus foveatus* subsp. *poultoni*, × 2.
D-E. Left mandibles of macrodont males of *Metopodontus foveatus*, s. str., × 2.
F-J. Left mandibles of males of *Metopodontus foveatus* subsp. *birmanicus*, × 2.

3. *M. FOVEATUS* subsp. *BIRMANICUS*, n. subsp.

The distinctive characters of this form have already been noticed (see previous page). All the specimens I have seen are somewhat dark in colour, therein resembling the Assamese race rather than the Himalayan.

Upper Burma: Chin Hills—Haka* (♂).

Lower Burma: ? Rangoon¹ (♂ ♀).

¹ See previous page, footnote 2.

Metopodontus maclellandi, Hope.

(Text-figure 3A.)

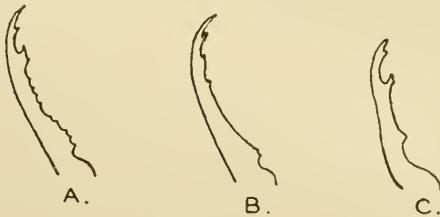
- E. Himalayas : Darjeeling Dist.—Darjeeling (σ) ; Pashok*
 (σ).
 Assam : Sibsagar (σ).

Metopodontus impressus, Waterhouse.

(Text-figure 3B.)

- E. Himalayas : Darjeeling District (σ).
 Abor Country—Kobo, 400 ft. (σ).

Our only specimens of this species are a macrodont male and a female. The former is very slightly smaller than our macrodont male of the preceding species. The armature of the



TEXT-FIGURE 3.

- A. Left mandible of macrodont male of *Metopodontus maclellandi*, $\times 2$.
 B. " " " " " " " *impressus*, $\times 2$.
 C. " " " " " " " *biplagiatus*, $\times 2$.

mandibles of these representatives of the two species is of one type, but is much weaker in *M. impressus* than in *M. maclellandi*. The obscure black median markings of the former species are absent in the latter, and on this character the identification of small males may probably be based. The hind tibiae are hairy on the inner side in both species, but not so strongly as in Westwood's figure of *M. jenkinsi*, nor are they enlarged as in *M. calcaratus* which Boileau believes to be identical with *M. jenkinsi*.

Metopodontus suturalis, Olivier.

- E. Himalayas : Darjeeling District (σ)—Kalipong, *ca.*
 2500 ft. (σ).
 Harmutti, base of Dafla Hills (σ).
 Bengal : Duars—Buxa near Bhutan frontier (σ).
 Assam : Dunsiri Valley (σ).
 Andamans (σ).

Metopodontus occipitalis, Hope.

Lower Burma : Rangoon (♂ ♀).

The median black mark on the pronotum of the male occupies about one-third of the distance between the anterior and posterior margins. In the female it is larger and touches both these margins.

Metopodontus biplagiatus, Westwood.

(Text-figure 3C.)

1. **METOPODONTUS BIPLAGIATUS**, Westwood, *s. str.*

E. Himalayas : Darjeeling District—Pashok* (♂ ♀).

Assam : Cherrapunji (♂); Sibsagar (♂).

Lower Burma : Tavoy (♂).

Andamans : Port Blair (♂ ♀).

In the Sibsagar specimen the reddish areas of the pronotum are almost as dark as the black ones. One of the males from the Andamans is more highly macrodont than any that appear hitherto to have been described. The form of the mandible of this specimen is shown in text-fig. 3C.

2. **M. BIPLAGIATUS** subsp. **NIGRIPES**, Boileau.

Siam : Hills between Thaungyin and Me Ping, *ca.* 1000 ft. (♂).

The markings of this specimen agree exactly with those described by Boileau, but the slight structural characters mentioned are not clearly shown. The pale markings are distinctly yellower than in our specimens of the typical form.

3. **M. BIPLAGIATUS** subsp. **INDICUS**, *n. subsp.*

S. India : Mysore (♂).

We have only one specimen, a small male. The head, thorax, legs and lower surface of abdomen are uniformly black with a faint reddish tinge. The distal tooth on the mandibles is remarkably strong.

Genus **PROSOPOCOELUS**, Hope.**Prosopocoelus approximatus**, Parry.

Siam : Raheng (♂) "came into bungalow during the day time."

Prosopocoelus buddha, Hope.

E. Himalayas : Darjeeling District—Singla, 1500 ft. (♂ ♀);
Pashok (♂ ♀).

Prosopocoelus oweni, Hope.

Assam : Sibsagar (♂).

Prosopocoelus wimberleyi, Parry.

Andamans (σ ♀).

In our smallest male (14.3 mm. long) the colour is very near that of *Metopodontus biplagiatus*, though the black markings are less clearly defined. Transitional specimens connect this with the large form. The female resembles *Metopodontus biplagiatus* in colour still more closely.

Prosopocoelus parryi, Boileau.

E. Himalayas: Darjeeling District—Ghumti (♀); Nagri Spur*.

Genus **CYCLOMMATUS**, Parry.

Cyclommatus tarandus, Thunberg.

Malay Peninsula: Johore (σ).

Genus **PRISMOGNATHUS**, Motschulsky.

Prismognathus subnitens, Parry.

E. Himalayas: Darjeeling District—Kurseong (σ ♀).

The small male (16 mm. long, excluding mandibles) resembles the form described by Parry, but the head is squarer than it appears in his figure. The clypeus is small and strongly bilobed. In the large male (21 mm. long) the head is flatter between the jaws, clypeus very broad and less strongly bilobed. The mandibles are armed with two stout teeth, one just below the tip and one about half way between this and the base; between these teeth, and between the median tooth and the base, it is armed with about 6-7 smaller teeth.

The female (13.5 mm. long) is slightly darker in colour than the male. The mandibles have an upper, terminal, and lower tooth. The clypeus is undivided; behind it the anterior border of the head is steep and concave much as in the small male, but there is no angular projection of the canthus. On each side of the head, between and in front of the eyes, there is a rounded ridge followed by a pronounced depression bordering a broad anteromedian convexity—structures which have their counterpart in the male. The whole upper surface is evenly but not very closely punctured, the head more strongly than the pronotum, and the pronotum than the elytra.

Genus **HEMISODORCUS**, Thomson.

Hemisodorcus nepalensis, Hope.

W. Himalayas: Mussoorie (σ ♀).

Tehri Garhwal—Balcha (♀).

Almora—Binsa* (σ ♀).

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft. (σ ♀); Kurseong, 5000-6000 ft. (σ ♀); Mungphu (σ).

The elytra of the female are scarcely if at all less glossy at the sides than above; the sides (especially the anterior angles) of the pronotum are finely roughened and are as a rule coarsely punctured in addition. The head is finely roughened in front of the tubercle, coarsely roughened on either side of a smooth median band behind it.

Hemisodorcus suturalis, Westwood.

W. Himalayas: ? Kashmir Valley, *ca.* 5000-6000 ft. (♀).
Dehra Dun District—Jaunsar* (♂ ♀).
Tehri Garhwal—Balcha (♂).

This species has hitherto been placed in the genus *Dorcus*, from which it is distinguished by the structure of the prosternum and the characters of the female. The female differs from that of the preceding species in the more uniform sculpturing of the upper surface of the head, in the less prominent canthus, and in the elytra which, like those of the male, are polished only in their anterior inner angles. In the Kashmir specimen the distinction between the dull and polished parts of the elytra is much less



TEXT-FIGURE 4.

Left mandibles of large and small males of *Dorcus yaksha*, nat. size.

marked than in the others. This specimen may, therefore, belong to a distinct species or local race; or it may be in poor condition.

Genus **DORCUS**, MacLeay.

Dorcus yaksha, n. sp.

(Pl. xxix, fig. 1; text-figure 4.)

E. Himalayas: Darjeeling District—Kurseong, *ca.* 5000 ft.
(♂ ♀).
Dafla Hills—Dikrang Valley (♂).

This species resembles *D. vicinus*, Saunders and *D. ratiocinativus*, Westwood, but differs from both in having the large tooth on the mandibles much smaller in proportion to the size of the insect, and situated more basally. It also resembles *D. antaeus*, Hope, but is much smaller, its tooth being proportionally larger than in that species. Females closely resemble those of *D. antaeus*, but are very much smaller.

From Kurseong we have two males, 33 and 29 mm. long respectively, and two females 28 and 22 mm. long respectively. They were all presented to us by Mr. N. B. Jahans, who collected

them when he was at school there. We also have a male collected by Col. Godwin-Austen in the Dikrang Valley ; it is intermediate in size between the two males from Kurseong.

In the largest males there is a rudimentary tooth on the gently tapered distal part of the mandibles as in large specimens of *D. antaeus*, and the proximal tooth is large and conical. In the smallest male there is no trace of the distal tooth, and the proximal tooth is smaller and less acute. The mandibles of the female resemble those of *D. antaeus*. The upper surface of the head is glossy but very finely roughened in the male, and coarsely roughened in the female.

The outer margins of the prominent anterior angles of the prothorax are highly S-shaped in the large male, the concavity being situated behind the convexity. In the small male and both the females it is entire. In the small but not in the large male the lateral and posterior parts of the marginal groove of the pronotum are broad and coarsely punctured. In the female this puncturing is still more extensive.

The elytra are glossy in both sexes. They are smooth above and coarsely and closely punctured at the sides ; but the punctures are almost obsolete in the large male. In the smaller, and to a less extent in the larger of our two females, the smooth dorsal area is traversed by incomplete longitudinal rows of punctures, arranged after the manner of the striations with which the elytra of *D. hopei* are marked. The posterior margin of the prosternal process is bordered by a groove, in front of which there is a distinct convexity in both sexes. The anterior tibiae are armed with about six teeth, the middle and posterior each with one small tooth.

Dorcus antaeus, Hope.

E. Himalayas : Darjeeling District, 4000 ft. (♂) ; Darjeeling, 7000 ft. (♂ ♀) ; Kurseong, 5000-6000 ft. (♂ ♀).

Upper Burma : Southern Shan States—Keng Dung* (♂).

The elytra of females and small males are obscurely punctured at the sides only. The Burmese specimen perhaps represents a distinct local race. It is about 54 mm. long (mandibles excluded), and may conceivably be the large form of *D. laevidorsis*, Fairmaire. It is the property of the Bombay Natural History Society.

Dorcus hopei, Saunders.

W. Himalayas : Dehra Dun District—Jaunsar* (♀).

E. Himalayas : Darjeeling District—Darjeeling, 7000 ft. (♂ ♀) ; Kurseong, 5000-6000 ft. (♂ ♀).

Assam : Khasi Hills (♂).

The elytra of females and small males are coarsely striatopunctate.

Genus **EURYTRACHELUS**, Thomson.**Eurytrachelus fulvonotatus**, Parry.

E. Himalayas: Darjeeling District—Darjeeling, 7000 ft. (σ ♀); Kurseong 5000-6000 ft. (σ ♀).

This species is distinguished by the structure of its clypeus from the genus *Hemisodorcus* with which it has hitherto been associated.

The extent of the fulvous markings is very variable in both sexes; sometimes only the posterior spots on the pronotum and the posterior streaks on the elytra remain; usually their anterior counterparts are also present and these may fuse with them; the pronotum may be bordered by fulvous markings on all four sides. The female resembles the male in colour.

Eurytrachelus reichei, Hope.

(Pl. xxix, fig. 2.)

E. Himalayas: Darjeeling District—Darjeeling, 6000-7000 ft. (σ ♀); Kurseong 5000-6000 ft. (σ ♀); Siliguri, in the Terai a few miles south of the base of the hills (σ).

E. pracellens, Möllenkamp, also from the Himalayas, must be very near if not identical with this species. The thickness of the mandibles of relatively large males, and the width of the pair of teeth on the inner side of each, are very variable.

Females of this species closely resemble those of *E. tityus*. They are, however, distinguished by the sculpture of the posterior ends of the elytra. In females and small males of both species the elytra bear a series of deeply impressed longitudinal punctured grooves with smooth ridges between them, of which ridges the first and third and often the sixth from the suture are the broadest. In the female of *E. reichei* the sixth ridge is of approximately uniform width throughout, and tends to be enlarged at the posterior end where it bends inwards to meet the end of the third ridge (see pl. xxix, fig. 2). In small males of *E. reichei*, it is also of uniform width throughout but the posterior ends of all the ridges are obsolete.

Eurytrachelus submolaris, Hope.

(Pl. xxix, fig. 4.)

W. Himalayas: Muree (σ ♀); Naini Tal* (σ).

This species is represented in the Dehra Dun collection by a short series of males without any locality record. The largest specimen answers closely to Boileau's account of the type (*Trans. Ent. Soc. London*, 1913, pp. 251-2, pl. ix, fig. 10). There is a similar specimen from Naini Tal in the Pusa collection.

The female is very like that of *E. reichei*, but the striation of the elytra is weaker (see pl. xxix, fig. 4, and Boileau, *Bull. Soc.*

Ent. France, 1904, p. 27—*Dorcus brachycerus* = *Eurytrachelus submolaris*, Boileau, *Trans. Ent. Soc. London*, 1913, p. 251).

***Eurytrachelus tityus*, Hope.**

(Pl. xxix, fig. 3.)

W. Himalayas. Naini Tal (♂).

E. Himalayas: Darjeeling District—Darjeeling (♂ ♀); Kurseong, 5000-6000 ft. (♂ ♀); Soom, 4000-5000 ft. (♀); Rungneet Tea Estate, 4500-5000 ft.* (♀); Siliguri, in the Terai a few miles south of the base of the hills (♂ ♀).

Assam : Cachar (♀).

In this species the third and sixth ridges of the elytra of females and small males taper away behind, and their union is only faintly indicated (see pl. xxix, fig. 3).

***Eurytrachelus travancorica*, n. sp.**

(Pl. xxix, fig. 5.)

South India : Travancore—High Range, 6000 ft. (♂).

A single male of this species has been presented to us by the Agricultural Research Institute. It is very small (12.3 mm. long), but the dorsal tooth on the punctured and glossy mandibles is so long and slender (pl. xxix, fig. 5) that I think the specimen must be a large one of its kind. Below and slightly proximal to the dorsal tooth is an obsolete ventral tooth as in *Dorcus rugosus*, Boileau, from which the species may be distinguished by its black colour and imperfectly divided eye. The punctured and finely roughened clypeolabrum is keeled above the margin, but the keel is low and is not more pronounced laterally than medially; though perfectly distinct, it is not at all conspicuous. The prosternum, too, is that of a *Eurytrachelus*, not a *Dorcus*¹.

The anterior angles of the head are rounded and slightly prominent; the oblique anterior surface of the head is lightly concave and finely roughened between them; the remainder of the upper surface is glossy, and the whole is strongly punctured. The mentum is very coarsely punctured; it is roughly trapezoidal with strongly rounded anterior angles and very faintly concave anterior margin.

The pronotum is glossy and more coarsely punctured than the head; it is vaguely sulcate in the middle line. The anterior margin is convex in the middle. The anterior angles are acute and very strongly produced forwards by the side of the head. The sides are divergent and lightly convex. The posterior angles are replaced by a lightly concave margin. The posterior margin is faintly convex.

¹ Since the above was written a specimen of Boileau's species has been presented by Mr. H. E. Andrewes. It proves to belong to the genus *Eurytrachelus*, not *Dorcus*. *E. rugosus* and *E. travancorica* are practically identical in structure apart from the slightly shorter canthus of the latter.

The elytra are strongly rugose throughout, with indications of the striae found in small males of *E. reichci* and *E. titvus*. The prosternum is coarsely but not very closely punctured in front of the coxae; between them it is more closely and finely punctured, clothed with golden yellow hair, and medially concave; it is closely punctured and almost rectangularly truncate behind. The mesosternum and metasternum are coarsely and closely punctured and clothed with rather long hair. The abdominal sterna are less closely punctured and their hair is very short.

Genus **PLATYPROSOPUS**, Hope.

Platyprosopus titanus, Boisduval.

1. **PLATYPROSOPUS TITANUS**, Boisduv., s. str.

Malay Peninsula : Penang (♂).

2. **P. TITANUS** subsp. **WESTERMANNI**, Hope.

E. Himalayas : Darjeeling District—Pashok (♂).

Dafla Expedition (♂).

Assam : Khasi Hills—Shillong (♂); Sibsagar (♂).

Genus **GNAPHOLORYX**, Burmeister.

Gnapholoryx velutinus, Thomson.

E. Himalayas : Darjeeling District—Darjeeling, 7000 ft. (♀).

Abor Country—Kobo, 400 ft. (♂).

Genus **AEGUS**, MacLeay.

Aegus adelphus, Thomson.

Malay Peninsula : Johore (♂).

Our specimen agrees in all respects with Deyrolle's figure of a specimen from Borneo (*Ann. Soc. Ent. Belg.* IX, pl. ii, fig. 8).

Aegus capitatus, Westwood.

Malay Peninsula : Johore (♂).

Aegus labilis, Westwood.

E. Himalayas : Dafla Hills—Dikrang Valley (♂); Dafla Expedition (♀).

Abor Country—Upper Rotung, under leaf-stem of plantain (♀).

Upper Burma : Southern Shan States—Reng Dung* (♂ ♀).

Andamans (♂).

The basal tooth is distinctly smaller than the dorsal in the large male (Dikrang Valley). In a smaller form (Andamans) it is smaller and median; in a smaller one still (Dikrang Valley) it is obsolete and very near the base; and in the smallest of all it has

disappeared. The elytra are coarsely punctured marginally, especially in small males.

The clypeus of the female is very broad with concave anterior margin. The sloping anterior part of the head, which is lightly concave, meets the horizontal posterior part at a distinct angle. The pronotum and elytra are coarsely punctured at the sides, more finely above. In the female from Reng Dung, which belongs to the Bombay Natural History Society, the anterior part of the head is less markedly concave than in the Himalayan specimens. The male by which it is accompanied is of the small form in which the dorsal tooth on the mandibles is not developed.

***Aegus impressicollis*, Parry.**

Sumatran Islands : Sinkep (♂).

***Aegus chelififer*, MacLeay.**

Malay Peninsula : Johore (♂).

***Aegus roepstorffi*, Waterhouse.**

Andamans : Port Blair (♂ ♀).

Nicobars (♀).

? Lower Burma : Rangoon (♀).

The clypeus of the female is narrower than in the preceding species. The separation of the anterior and posterior parts of the upper surface of the head is less abrupt. The punctures of the pronotum and elytra are much coarser and tend, even on the innermost ridge of the latter, to fuse together so as to produce a general rugosity of the surface.

***Aegus kandiensis*, Hope.**

Ceylon : Central Province—Kandy (♀) ; Peradeniya (♂ ♀) ;

Pundaluoya (♂) ; Talawakelle* (♂).

Sabaragamuwa—Kegalle (♀) ; Yatiyantota (♀).

Uva—Haldunmulla (♂).

The female of this species closely resembles that of the last. It is, however, even more closely punctured, the difference—which is never very great—being clearest on the pronotum.

Genus **NIGIDIUS**, MacLeay.

***Nigidius dawnae*, n. sp.**

(Pl. xxix, fig. 7.)

Lower Burma : Amherst District of Tenasserim—near Misty Hollow and Sukli, towards the top of the western and eastern slopes respectively of the Dawna Hills, 2000-2500 ft. (♂ ♀).

Siam : Meetaw Forest, west of Raheng.

The Burmese specimens of these beetles were found in the interior of two pieces of hard dry wood by the road-side. In one piece—that found on the eastern side of the hills—they were accompanied by larvae.

♂. Short and stout like *N. obesus*. Black, 13.0-21.5 mm. long. The long curved dorsal tooth of the mandibles is about as long as the part of the mandible in front of it. Its posterior margin bears a rounded laminar tooth which is sharper in small than in large specimens. The apex of both mandibles is tridentate, but the lowest tooth is rudimentary on the right side. The labrum is glossy; its anterior margin is concave and its anterior angles are laterally produced and acute; the clypeus forms a transversely linear convexity above its whole basal width, and is bounded behind by a groove from which a row of erect hairs project in unworn specimens.

The anterior margin of the frons is convex in the middle. The upper surface of the head is flattened as a whole, and slightly undulating; its anterior part is always glossy, but its posterior part may be dull; its punctures are much finer in front than they are behind, where each is broad and flat with a raised ring in the centre. The canthus is abruptly constricted on the outer side about the middle of its length; the posterior part is broader and more convex than the anterior. It is coarsely and very closely punctured. The mentum is closely and very coarsely punctured; it is slightly wider in front than behind and distinctly wider than long; the anterior angles are rounded and the anterior margin is concave.

The pronotum is more than twice as broad as long; it is strongly convex across the middle in front. Its surface is glossy; it is coarsely punctured at the sides, along the anterior and posterior margins and in the median groove which does not nearly reach the anterior margin. The anterior margin is lightly concave on either side of a broad median convexity, the other margins are convex as a whole, but the anterior part of the narrow reflexed border is widened. In large specimens this widening is very abrupt (see pl. xxix, fig. 7).

The grooves of the elytra each contain one row of large shallow punctures, except the last, which contains about three such rows; and there is a row of fine punctures on each side of each of the somewhat narrow ridges between them.

All the sterna are somewhat coarsely punctured; the prosternum is lightly keeled between the coxae and descends gradually to the level of the mesosternum behind them. The metasternum has a median groove.

The basal piece of the genital tube is simple, and does not overlap the median lobe; it is not chitinized in the middle line above. The lateral lobes are very slightly concave on their inner sides. The median lobe is cylindrical and is deeply bifid. The internal sac is laminar, elongate and parallel-sided. It is supported by a pair of strongly chitinized laminae of which one lies on either side of the ductus ejaculatorius in the tissues of the sac.

The tips of these supporting laminae are weak and unite with the chitinous support of the ventral margin and lateral walls of the funnel-shaped aperture of the ductus ejaculatorius. The left lamina, in addition, gives off a broad tongue-like branch just below the tip. This tongue extends slightly beyond the end of the body of the sac. The tongue is unarmed, but a band of fine backwardly directed teeth extends along the ventral distal margin of the body of the sac, and thence obliquely backwards on both sides to the dorsal surface, where the left hand portion of the band ends about opposite the unpaired tongue-like process, the right hand portion being about five times as long.

There is no flagellum.

The internal sac is permanently everted. When the genital tube is retracted this sac does not lie against the median lobe, but in a delicate sheath attached to the outer surface of the internal abdominal segments.

♀. Differs from males only in having somewhat smaller mandibles in proportion to its size, and in the structure of the genitalia.

This species appears to come very near *N. obesus*, Parry, but it is larger and the anterior angles of its pronotum are neither simple nor of the shape shown in Westwood's figure (*Trans. Ent. Soc. London*, 1874, pl. iii, fig. 5).

The anterior margin of the frons, too, is concave on either side of the median convexity, not evenly convex as shown in that figure. There are also slight differences in the shape of the canthus.

Nigidius himalayae, n. sp.

(Pl. xxix, fig. 6.)

E. Himalayas : Darjeeling District—Pashok (♂).

A male of this species was obtained by H. E. Lord Carmichael's collectors in the Darjeeling District. It is 20.0 mm. long, and was the only specimen I had seen when the following description was drawn up. More recently Mr. Lister has sent me specimens from Pashok which vary from 13.7 to 17.7 mm. in length.

In general appearance this species resembles the last, but it is distinctly slenderer. The lowest terminal tooth of the right mandible is absent. The clypeus is longer than and scarcely as wide as in the last species, and is bilobed. The middle part of the frons is less prominent than in that species. The canthus is less deeply cleft, and the posterior part is less prominent. There is a strongly marked depression in the middle line towards the back of the head, as well as a pair of depressions behind the anterior angles.

The pronotum is less than twice as broad as long. It is bordered in front by a very broad groove. This groove is marked with large shallow punctures, and is crossed in the middle line by a fine keel, which is terminated behind by a transverse keel of similar dimensions to itself. The broadly reflexed anterior parts of the

lateral margins of the pronotum are well developed. The metasternum is not punctured in the middle. The abdominal sterna are also less uniformly punctured than in *N. dawnae*.

The basal piece of the genital tube is furnished with an elongate triangular mid-ventral lamella between the lateral lobes. Each of these lobes is strongly concave on the inner side, and is furnished with a large inwardly directed ventral lamina. Together these structures form an imperfect sheath in which the median lobe and the base of the internal sac are hidden. The exposed portion of the latter is ribbon-like with a rounded extremity; the terminal portion, though supported by the chitin accompanying the ductus ejaculatorius, is composed apart from this of a curious cellular material which when dry resembles dried vegetable tissue. The armature is confined to the region immediately preceding this terminal portion. Although the internal sac is permanently evaginated, as in the preceding species, it lies with the remainder of the genital tube inside the internal abdominal segments when at rest.

In other respects this species resembles *H. dawnae*.

Nigidius distinctus, Parry.

Bengal: Duars—Maindabari, Buxa Division (♂ ♀).

Upper Burma: N. Shan States—Hsipaw* (♀).

Mr. Beeson has sent me eight males and four females of what I take to be *Nigidius distinctus* from Maindabari. In both sexes there is some variation in the proportion of length to breadth, and in the puncturing. The specimens agree as well with Fairmaire's description of *N. oxyotus* from Tonkin (*Ann. Soc. Ent. Fr.* (6) VIII, 1888, pp. 339-340) and Boileau's description of *N. birmanicus* from Rangoon (*Trans. Ent. Soc. London*, 1911, pp. 446-449) as they do with Parry's description and figure of *N. distinctus* (*Trans. Ent. Soc. London*, 1873, pp. 341-2, pl. v, fig. 7); and I am unable to distinguish them from the specimen from Hsipaw in the Dehra Dun collection. The Hsipaw specimen is unfortunately a female, and I have been unable to examine the male genitalia of any Burmese or Malaysian specimens. Possibly they might afford distinctive characters as in the two species described above.

Nigidius impressicollis, Boileau.

Assam: Khasi Hills—Maflong, 5900 ft. (♂ ♀).

Adults and larvae of this species were found by Mr. S. W. Kemp in damp and thoroughly soft and rotten wood. The sexes are scarcely distinguishable externally.

Genus FIGULUS, MacLeay.

Figulus interruptus, Waterhouse.

Ceylon: Peradeniya.

Figulus scaritiformis, Parry.

Malay Peninsula : Johore.

Genus **CARDANUS**, Westwood.

Cardanus sulcatus, Westwood.

Malay Peninsula : Johore.

